

D.C.F.D.



Fire Station Design Requirements

Scope and Purpose – Rev. 3/6/06

This manual is intended to give our designers firm guidance on what features the DC Fire and EMS Department wants included in our new and renovated fire stations. By putting our needs down in a formal manner we hope to eliminate a lot of confusion and standardize a number of areas where different designers have applied different concepts. We will be happy to explain the reasons behind our design requirements and consider your suggestions for improvements or changes.

We also want our design reviewers to keep these requirements in mind when evaluating ongoing design developments that are submitted for their review.

This manual is not intended to replace the detailed specifications you will develop in Volume 2 of the Bid Documents. However, we expect that our requirements will be included in your specifications and design drawings. If you have any questions, notice a conflict, etc. contact the Capital Project Manager or Chief of Facilities Maintenance and we will resolve the issue.

Throughout the design process remember that we are interested in simplicity, durability, long service life, lowering future maintenance/repair costs and reasonable standardization of our stations.

Distribution – Rev. 3/9/06

Copies of this manual will be distributed as follows:

FMO Chief
FMO Captain – Capital Projects
FMO- Capital Project Manager
FMO – Assistant Project Manger
Assistant Fire Chief/Services
Swanke, Hayden, Connell and Associates
Zivic and Hurdle
Baker, Cooper& Associates
Austin L. Spriggs Associates
Advanced Consulting Engineering
Samaha and Associates
Volkert and Associates
McKissack and McKissack

Updates and corrections will be distributed by email.

An updated index will be sent with each revision so recipients can check their copy with the revision dates listed in the index and make appropriate corrections.

DCFD Background Information – Rev. 3/15/06

This information is meant to help you understand DCFD equipment and units and their requirements so you can apply them to your designs.

Fire stations come in different sizes based on history (we're often stuck with the size of buildings that were designed 80-100 years ago) and the amount of units based there. Generally all stations have at least an Engine and an EMS (Ambulance or Paramedic) Unit, some have multiple EMS units. About half of the stations also have a ladder truck, a number of stations house a Battalion or Deputy Fire Chief and a few have a heavy Rescue Squad or other special operations unit.

Engine – Sometimes called a pumper, 28 feet long, 8 ½ feet wide plus mirrors 26,000 lbs carries a crew of 4

EMS Unit – 22 feet long, 10,000 lbs carries a crew of 2 (occasionally 3)

Ladder Truck – 56 feet long, 8 ½ feet wide plus mirrors 50,000 lbs carries a crew of 5

Battalion/Deputy Fire Chief – SUV vehicle with a crew of 2

Rescue Squad/Special Operations – 40 feet long, 8 ½ feet wide plus mirrors 35,000 lbs carries a crew of 5-6

(these units will also have at least one Tactical Support Unit on a 1 ton pickup chassis and may have several more vehicles/trailers)

Over the years, all of these vehicles have continuously gotten longer, wider, and heavier. This trend will not stop, so allow for vehicle growth in your designs. This is really critical in the width and height of apparatus lane doors.

Stations with a Chief in quarters will require another office area with adjacent bunk room/bathroom in addition to the normal station needs. This office can be on the second floor.

General Design Requirements -Rev. 2/24/06

All planning and design for major renovations will include:

1. Updated locker and restroom facilities for male and female personnel.
2. Dedicated EMS decontamination area with stainless steel sink and at least one stainless steel shelf.
3. Ventilated area for gear lockers. A dedicated negative pressure room is the preferred system. Where there is not enough space, placement of an exhaust fan in the area of gear lockers will be acceptable.
4. ADA compliant public entrance and restroom on first floor.
5. Life Safety and Fire Code enhancements. This will include fire detection and alarm system and an automatic sprinkler system.
6. Hood and duct exhaust for kitchen stove.
7. Generator and transfer switch, if not already installed.
8. Diesel exhaust system, if not already installed.
9. Vinyl tile (12x12 VCT) will be the standard floor covering material. Ceramic tile may be used in kitchens, locker and restrooms.
10. Heating systems will be gas fired forced hot air, unless this is not feasible for some reason.
11. HVAC controls will be electronic and will not use compressed air to operate valves, dampers, etc.

Structural Components – Rev. 2/24/06

Fire stations are a critical part of the community and are essential to maintaining public safety. For this reason, they should be designed for an extended useful service life. Some of the stations we are now renovating are over 100 years old. This should be used as a guide for what we expect in our designs.

Structural components should consist of stable materials which are not subject to excessive wear or deterioration over the expected building life cycle, such as steel, concrete, concrete block, brick and dimensional lumber.

The use of structural materials which are subject to failure through deterioration, delamination, or failure of connections shall be avoided. This section specifically refers to manufactured lightweight wooden components such as plywood (or OSB) engineered I-beams and lightweight wooden trusses fastened with gusset plates. These products do not have a long term track record to show that they will meet our requirement for long service life. We would expect early failure through stresses applied by flexing under various loads, temperature changes etc. causing movement that will breakdown the initial stability of glued or gusseted joints and connections. This will lead to a requirement for early major structural repair or replacement. The reduced initial cost of these materials will be more than offset by the expected cost of future problems.

When cost considerations make the use of any of these products seem necessary to the designer, they will obtain specific permission for each use of lightweight materials from the Chief of Facilities Maintenance and Capital Project Manager.

Company Office Requirements – Rev. 2/24/06

Each station will have a company office. In a double house, each company should have a separate office if space allows. In tighter quarters a shared office is allowed, but each company will have a desk of it's own. Also a desk must be provided for the EMS unit(s).

Company offices should be designed so they can be used for confidential business with some degree of privacy, such as counseling personnel or disciplinary matters. This means they should not be designed as a "pass-through" space and must be provided with doors that close. The watch desk can be near the office(s) but should not be in the same room (i.e. a door is required between watchdesk and office)

Generally, there is a telephone at each desk and a shared PC computer for one or more companies. Another PC computer is provided for the EMS unit(s). There will be a single, shared networked printer.

Additional office space will be required in any station housing a chief, EMS supervisor, special operations unit or an administrative unit of any type. The requirements for these will be coordinated with FEMS during design.

Kitchen Requirements – Rev. 3/27/06

All countertops, shelving, cabinetry, etc will be stainless steel. Do not use wood or laminates.

Dishwashers will be of the household type with stainless steel exterior, such as a Sears Kenmore. Commercial washers such as the Hobart are not acceptable. The cost of service and repairs are astronomical.

Provide a Vulcan 6 burner, single oven stainless steel gas stove. Exhaust ductwork should vent to the outside in the shortest practicable distance avoiding multiple bends to the extent possible. Provide cleanouts at bends, with access panels if in a finished wall or ceiling.

Provide deep bowl double sink (stainless steel) with drainboard on both sides. Large household type garbage disposal will be installed on one bowl. Also provide commercial type flexible spray/rinse hose.

Provide one refrigerator, but make accommodation for 4 additional refrigerators (one for each platoon- they provide) which do not have to be in the kitchen. May be eliminated if space does not allow – coordinate with FEMS.

Provide a floor drain in the middle of the kitchen floor. Have the floor graded towards the floor drain.

Sliding Poles – Rev. 2/24/06

Sliding poles will be constructed solely of brass, no other metal may be included (i.e. brass sleeve over steel) and will be a nominal 2-1/2 inches in diameter.

Poles will be mounted in the center of a 3' circular opening, securely fastened at the top and bottom according to the manufacturer's recommendations or standard industry practices.

The pole hole will be enclosed in an enclosure, similar to a closet, with a steel door that opens in to the enclosure and is equipped with a rated self closing device. The dimensions of the enclosure will be of such size to enclose the 3' pole hole and allow the door to open fully inwards without encroaching on the 3' circle.

No hatch, doors, clamshell or similar device will be installed in or under the pole hole.

Any required fire rating will be met by the construction of the pole closet and door assembly.

The minimum clearance distances from the center of the sliding pole to any wall or obstruction are: on the upper floor 25" and on the ceiling below and downward 30" (a five foot circle) This is to allow the firefighters to safely slide the pole without striking an object.

An approved rubber or closed cell landing mat will be provided at the base of each pole.

Whenever possible, existing slide poles will be reused on site. Any pole that cannot be reused on site will be turned over to DCFEMS for other reuse.

A suggested vendor is:

McIntire Brass Works, Inc. 617-547-1819 – Model 19

Storage Requirements – Miscellaneous Rev. 3/9/06

Fire stations have several requirements for storage space that need to be considered in their design.

1. Company storeroom for office supplies, publications etc. (vicinity of company office desirable)
2. Tool storage – room for storing spare firefighting tools and appliances.
3. Hose Storage – This can be an open rack either custom built or using available commercial hose racks.
4. Cleaning supply storage
5. Medical equipment/supply storage (SECURE)
6. Commissary/housefund storage area

Storerooms will not be combined with mechanical rooms or other service spaces.

Work bench/Tool Room – Rev. 2/24/06

Each fire station requires a place where the firefighters can do repairs and maintenance on their tools and appliances. The size can vary according to space available but must be adequate to the task (minimum of 8'). This room can be located in the basement, if there is one or it can be on the apparatus floor (no room enclosure required).

There will be a solidly constructed workbench having a wooden top surface with a vise and grinder mounted on it, a new vise and grinder will be specified in the design. The bench should have shelving for the storage of tools, parts, paint, etc. This may be open shelves or closed in a cabinet.

Provide adequate ventilation for removal of dust and paint fumes. A simple exhaust fan will do nicely.

Lockers/Locker Rooms- Rev. 3/8/06

Two types of lockers are provided for employees, a personal locker and a ventilated gear locker (uniformed personnel only)

There will be a male and female locker room in each station, this will be attached to the appropriate shower and bathroom facilities and will be in the proximity of the bunkroom.

Company Officers and Chiefs personal lockers will be in their individual or shared bunkrooms.

The standard locker will be painted steel with some louvered vents, 72" high, 12"-18" (larger size is preferred depending on space availability) wide and 18" deep. There will be a shelf at the top and a bar for hanging garments just below the shelf. They will have a single full height door and the opening mechanism will have a hole for an employee supplied padlock.

Crew size for determining the number of regular lockers needed in locker rooms (not including officers/chiefs):

Engine -20

Truck – 24

Rescue Squad/other – 24

Ambulance - 12

Chief (Aide)- 4

Consult with FEMS regarding the appropriate division between male and female facilities on each project.

Officers and Chiefs lockers, where practicable a built in lockable closet for each platoon (there are four platoons) will be provided including a shelf and closet rod. Where this is impracticable double door metal lockers 72" high, 36" wide and 18" deep will be provided. These will have a shelf across the top, a garment hanging bar below the shelf for at least half it's width, other shelves are optional.

Gear Locker rooms will be shared by all assigned personnel. Gear lockers are constructed of heavy expanded steel mesh, welded assembly, 72"x21"x18" with a shelf at the top, a hanging bar and two (2) clothes hooks mounted left and right (Penco Model 6WP134 is suggested, it can be ordered singly or in pre-attached groups of 2 or 3 as appropriate for the space configuration). Gear Locker rooms will be ventilated with a negative pressure, exhausting to the exterior of the station. The purpose is to remove contaminants coming from dirty gear to the outside rather than allowing it to flow back into the station, and this will be the principle to guide your design. Intake air may be ambient flow through louvered openings or through forced air mechanical fans, if required. In all cases, the simplest configuration that meets our needs will be specified to

reduce initial cost and ongoing maintenance and repair. For this reason, ambient intake air is greatly preferred.

There will not be any ductwork connected to individual lockers. Where space does not permit a ventilated gear locker room large enough for all personnel, excess lockers will be placed along the walls of the apparatus room and a general exhaust fan provided.

Crew size for determining the number of gear lockers needed (including officers/chiefs):

Engine -24

Truck – 28

Rescue Squad/other – 28

Ambulance - 12

Chief (Aide)- 8

Fire Station Locks and Security – Rev. 2/24/06

Fire Stations are considered critical infrastructure in the Homeland Security arena, the Department has taken steps to harden it's facilities by increasing the level of security and fire resistance.

Exterior station doors will be constructed of heavy gauge steel (i.e. good quality commercial doors). Windows are optional as is the specific design pattern of the door. We will try to accommodate historic appearance issue to the extent product availability conforms to our security requirements. Doors will be ordered pre-drilled for the appropriate type of lock listed below.

Exterior station doors will be equipped with one of two types of locks. At least one, and preferably two (front and rear), doors will be equipped with the International Electronics, Inc (IEI) Model LS2PC26DAM-ICC keyless entry locksets equipped with American IC Corbin cores. All other exterior doors will be equipped with Best 6 pin cylinder/cores. Keying information will be provided by FEMS.

Where this equipment is already installed, have the contractor remove it (if necessary), either store it or turn it over to FEMS for storage, and reinstall same. This equipment is currently installed in all fire stations.

Interior locks will be 'key in the knob' design. Locks will be provided on doors to the following rooms:

Chief's Office and Chief's Bunkroom (keyed alike) – not present in all stations
Company Officer's Bunkroom(s) and Company Office(s) (keyed alike)
Storage Room(s) (keyed alike)
Medical Supply Storage
Commissary/House Fund Storage

To provide additional security, windows will be of metal construction (steel or aluminum), double or triple glazing, with adequate latching/locking device.

Automatic Fire Sprinklers will be installed throughout the station, to the maximum extent practicable.

A local type interior fire alarm system will be installed to minimum code requirements.

Fire Station Lighting Requirements - Rev. 2/24/06

1. All interior fire station lights will be of the “instant on” type, requiring no warm up period to reach full illumination. Fluorescent and incandescent bulbs are the preferred lighting products.
2. In order to standardize our supply chain, all designs will include only the following bulbs for general interior lighting use:
 - a. 8’ fluorescent
 - b. 4’ fluorescent
 - c. 2’ fluorescent (U-shaped)
 - d. 100w incandescent
 - e. 60w incandescent
 - f. Compact fluorescent with standard screw type base.
3. All interior fire station light fixtures will be controlled by a switch and capable of being turned on and off manually. Lights which stay on at all times will not be used.
4. Outside lighting, where provided, may require a warm up period prior to reaching full illumination.
5. In order to standardize our supply chain, only the following bulbs will be used for exterior lighting (in addition to those listed above):
 - a. Metal Halide 175 watt ED28 mogul base clear bulb
 - b. 300/500w halogen flood light
 - c. PAR 38 100 w flood light
6. See Station Alerting for Trip Light Requirements

Watch Desk – Rev. 3/27/06

The station watch desk is the primary point for the receipt of alarms and functions as the nerve center of the station.

The following equipment is located on or near the watch desk.

Main (console type) telephone

MOSCAD unit

PC computer for the Reader Board

PA Amplifier and microphone

Printer (station alerting)

Trip light and gong controls

Miscellaneous information/documents for company and public information

The watch desk shall be solidly constructed for maximum durability and have a minimum surface depth of three feet (3') from front to rear.

Unless it is physically impracticable due to space limitations within an existing station, the watch desk should be located in a separate room dedicated for that purpose only.

Due to the technical nature of this equipment, some of which is a proprietary product of DataNet Systems, we want the general contractor to make provisions (space, conduit, etc) for the equipment. Actual installation will be made by DCFEMS communications or contractors.

Station Alerting for A/Es – Rev. 3/27/06

Each fire station has several systems related to the receipt of alarms and alerting of station personnel. Since these may be unfamiliar to you, here is a brief description for you to refer to in your design process. This should be passed on to the person or firm that does your electrical design.

Each station has a speaker/public address system throughout the building, this is hooked into a radio receiver located at the watch desk and relays radio transmissions throughout the station. There is also an amplifier and microphone which allows the watch detail to make announcements throughout the station using the same speakers. There needs to be a speaker in, or audible in every room of the fire station. In addition, outside speakers are provided to the front and rear of the station to alert personnel who are outside. Each room has a wall mounted volume control switch to control speakers in that room. We have standardized the model of speakers used throughout all stations, you will be provided a list of manufacturer model numbers to be included in your design.

Trip lights are a special lighting circuit which can be activated from the watchdesk, both manually and automatically by a relay when an alarm is received for that station. The relay activates the triplights for a period of several minutes, after which the relay opens and the triplights turn off. There is also a toggle type switch to activate the relay, when the switch is toggled on, the relay will keep the lights on until toggled off (no time reset feature). Alarms are often received when the firefighters are sleeping in dark rooms. The purpose of the trip lights are, to provide them with sufficient lighting to safely get from where they are to the fire apparatus. It can involve either completely separate fixtures which only come on as trip lights or by partial activation of normal lights through a different circuit. Trip lights are required at a minimum in all bunk rooms, locker and restrooms, sitting room, apparatus floor (garage) and the hallways between them. Needless to say all trip lights need to be of the instant on type (requiring no warm period for full illumination). In fact, no lighting in the station should require a substantial warm up period, such as HID, for this reason incandescent or fluorescent fixtures are the preferred design.

House bells or gongs are provided throughout the station to audibly alert firefighters to alarms, they need to provide a loud and unmistakable signal. These bells are activated by a button located on the watch desk which also trips a relay activating the trip lights. This is a momentary type switch meaning the bells sound when it is depressed and stop when it is released. Edwards Adapt-A-Bell is the standard product.

The MOSCAD is a computerized device which centrally controls the automatic function of station alerting. It is located in a metal and glass cabinet on rollers placed underneath the watchdesk. At least six feet of extra cable should be attached to the MOSCAD to allow it to be moved for maintenance, etc. without being disconnected. Extra cable should be neatly coiled and secured to prevent tangling.

Station Alerting Page 2

The Reader Board is an illuminated sign board mounted on the wall of the station which visually displays alarm information to station personnel. Depending on the configuration of the station, there may be a requirement for a second reader board. The reader board has a dedicated mini-tower type PC which receives information from the MOSCAD and transmits it to the reader board(s). This PC is mounted under the watchdesk. Provision should be made to raise it off the floor and protect it from the environment to the extent practicable. At least six feet of extra cable should be attached to the PC to allow it to be moved for maintenance, etc. without being disconnected. Extra cable should be neatly coiled and secured to prevent tangling. Reader boards require computer cabling and 110v power at their location.

There is a standard computer printer located on the watchdesk connected to the MOSCAD, which prints out information on alarms as they are received. The printer requires 110v and printer cable. At least six feet of extra cable should be attached to the printer to allow it to be moved for maintenance, etc. without being disconnected. Extra cable should be neatly coiled and secured to prevent tangling.

Each station has two antennae attached to the MOSCAD to allow radio signals to be received. Conduit must be provided to run coaxial cable from the MOSCAD to the antenna location. These antennae are of the directional type and must have a direct line of sight to one or more radio repeater sites. Either us or the Office of Unified Communications can be consulted for information on the repeater site locations. Generally, you can expect the antennae to be mounted at or near the highest point of the station.

Needless to say, it is imperative that all systems involved in the receipt of alarms and station alerting must be connected to the emergency power panel from the generator. You will have to make provision for the proper routing of wiring for each of these systems in your design. The Fire and EMS Department will provide you with additional information and technical specs at your request, we will also put you in contact with the vendors who provide and maintain these critical systems.

Due to the technical nature of this equipment, some of which is a proprietary product of DataNet Systems, we want the general contractor to make provisions (space, conduit, etc) for the equipment. Actual installation will be made by DCFEMS communications or contractors.

Phones and Computers – Rev. 2/24/06

In fire stations, computers are required at:

1. Watchdesk for MOSCAD-reader board etc.
2. Each Company Office (1)
3. EMS Desk (1)
4. Chief and Aides desk (2)
5. EMS Supervisor Desk (1)

Each will require appropriate Cat 5 or Cat 6 (preferred) cabling to be installed.

There is a central network controller switch and router assembly in each station, this should be located in a utility closet, mechanical room, etc.

Telephones are required at:

1. Watch desk (large display screen type)
2. Each officers desk in company office (1,2 or 3)
3. Each officers bunkroom
4. Sitting Room
5. EMS Desk (1)
6. BFC or DFC Desk (1)
7. BFC or DFC Bunkroom (1)
8. Aides Desk (1)
9. Aides Bunkroom (if separate from main bunkroom) (1)
10. B(D)FC/Aide phone in Sitting Room (1)
11. EMS Supervisors Desk (1)

Phones for Chiefs and Aides are only required in stations with a Chief

Phones for EMS Supervisors are only required in stations with a Supervisor.

Phones for EMS Desk is only required in stations with EMS Unit(s).

Each phone will require appropriate cabling to be installed.

The demark for incoming phone service and control equipment for internal phone should be located in a utility closet, mechanical room, etc.

Station Bathrooms - Rev. 2/24/06

Bathrooms will be provided as follows:

1. Public bathroom (single occupancy) fully ADA compliant – located on the first floor, preferably close to the public entrance (or community room entrance if present).
2. Employee bathroom – first floor (may be single occupancy and can be eliminated if required due to space limitations).
3. Main Male and Female bathrooms located adjacent to the respective gender specific locker rooms. Will also have shower facilities. Coordinate with FEMS on relative size of male and female facilities.
4. Individual bathrooms will be attached to Company Officer and Chief's bunkrooms and will include a shower. Two company officers can share a single bathroom (located between the bunkrooms) if space limitations require it, this is not suggested since the officers may be of different genders – this option will require FEMS approval.

The following is guidance on the desired fixtures:

1. Commodes – White porcelain heavy duty elongated bowl with Sloan valve operation. Located in Metal or solid plastic stalls in shared or multiple user bathrooms.
2. Urinals - White porcelain heavy duty with Sloan valve operation - Metal or solid plastic privacy screens between units. Urinals will not be provided in single occupancy bathrooms.
3. Sinks will be wall hung or pedestal mounted porcelain, porcelain on cast iron or stainless steel. There will be no wood or laminate vanities, countertops, cabinets etc. used in the bathroom. Free standing stainless steel countertop/sink combinations are acceptable.
4. A single stainless steel or aluminum shelf will be located above the sink(s) and below the mirror.
5. Sanitary napkin dispensers/disposal etc. will not be included in the design.
6. Showers will have a properly sloped concrete pan with an adequate rim to prevent leakage. Concrete block (sealed) or ceramic tile over cement backer board or moisture resistant drywall is the preferred construction method. Provide a shower curtain rod (not a shower door). Individual shower stalls are preferred. If space considerations or previous construction require a gang shower, include privacy walls between shower positions.
7. Provide wall mounted paper towel dispensers. Do not use the kind that has a built in trash container.
8. Soap Dispensers – We are currently using Hilyard foam type soap dispensers. Until further notice use this unit in your designs. One dispenser can go between two sinks. Do not put these in the showers.

HVAC – Rev. 3/2/06

Fire stations will be heated by a gas fired forced air heating system. The apparatus floor (garage) area will be heated by gas fired infra-red radiant strip heaters.

Air conditioning will be provided except for the apparatus floor, attic and basement areas.

Duct work should be made of sheet metal properly designed and sized to maintain adequate velocity for even distribution of heated or cooled air. The use of flexible ducts should be avoided.

All controls, thermostats, switches and similar devices will be electric or electronic. Compressed air will not be used in conjunction with the HVAC system.

Consideration should be given to the use of a zoned system consisting of several smaller HVAC units rather than one large system covering the entire firehouse. This will allow for partial heating or cooling to be provided when one zone suffers mechanical failure and will not affect the habitability of the entire station.

Thermostats will be mounted in lockable enclosures. All thermostat locks in a station should be keyed alike.

Generators – Rev. 3/2/06

All fire stations require a diesel powered emergency generator with an automatic start on power failure feature and an automatic transfer switch. Where a generator system in good condition is already present it can be reused.

Generators need to be sized to carry the needed electrical load to maintain essential systems and habitability. 15kw is the minimum acceptable generator size. Fuel tanks should be sized for extended running.

Emergency generator power should cover:

1. Station Alerting, including MOSCAD, amplifier, bells, speakers, trip lights, etc.
2. Apparatus lane doors (motorized operation)
3. Adequate lighting in the station for safe operation
4. Power to Switch/Router for phones and computers
5. Refrigerator circuit
6. A minimum of one computer (Watch Desk or Company Office)
7. BFC/DFC Office (if present) – at least one computer.

If there is sufficient generating capacity the emergency power is desirable for:

1. Heating system – Controls (thermostat, ignition), circulating pumps and/or blower motors.
2. Additional lighting/outlets
3. Diesel exhaust ventilation system
4. Fans/blowers for negative pressure gear locker room.

Cable TV - Rev. 3/2/06

District Cablevision's franchise agreement requires them to provide free basic service to DC Government buildings. The purpose of this is for community information, city council hearings, news programs and current events. The government is not in the business of providing entertainment to its employees.

Designs should include a connection to cable television service and interior coaxial cable from the service entrance to a single point in the sitting room. The most flexible option is probably to provide enough cable to reach any part of the room and leave it coiled until station personnel determine the television location.

Any further extension of television cabling within the station will be the responsibility of fire station personnel and will not be done until the station is reoccupied after completion of the construction contract.

Bunkrooms – Rev. 3/2/06

Bunkrooms are provided in fire stations so personnel can rest during their 24 hour shift or during period of extended duty under the Emergency Mobilization Plan.

Chiefs and Company Officers will have individual bunkrooms, with an individual bathroom attached and four closet type lockers. If space considerations make this impracticable, any modification or shared concept will be worked out with the Chief of Facilities Maintenance and Capital Project Manager on a case by case basis.

The main bunkroom is an open, uni-sex space and should be situated for direct access to the apparatus floor to facilitate emergency responses.

In single story stations, the bunkroom will be adjacent to the apparatus floor with outward opening double doors in between. These doors will not require operation of any knob or other device to open but will be free swinging with an automatic closing device attached to each door slab. Two pairs of doors are preferred, except in smaller single houses.

In two story stations, the bunkroom will be located immediately above the apparatus floor with immediate access provided by sliding poles located in closets with an inward opening swinging door with automatic closing device attached. Three or more poles are preferred, except in smaller single houses.

Figure on a minimum 64sf of clear space per bunk (8'x8'), with greater space desirable. Bunkrooms in single houses should be designed for at least 6 bunks
Bunkrooms in double houses should be designed for at least 12 bunks

There will be no built in furnishings such as headboards, night stands, dressers, desks or the like installed in the bunkroom. Not only is this unnecessary, it limits the possible configurations of the bunks. The same applies to individual reading lights, electrical outlets, etc. There will be no telephone or computer connections in the bunkroom.

In order to provide a limited sense of privacy in this shared space, partial height divider walls should be provided. These walls should be high enough to screen a person in a bunk, but not so high as to limit the flow of air or interfere with proper lighting. Generally 4-5 feet would be good. The divider walls should not impede free access from any bunk to the apparatus. For this reason, straight walls are preferable to "T" or "L" configurations. Where T or L shaped walls are used the short section should not extend more than 3 feet from the main wall section.

Colors and Finishes – Rev. 3/3/06

Standardizing the selection of colors and materials for renovations and new construction will simplify the design process and limit the amount of different materials we need to stock for future repairs.

Standard floor covering will be Vinyl Composite Tile.

Ceramic tile (non – skid texture) may be used on bathroom floors.

Glazed ceramic tile may be used on the lower part of bathroom and kitchen walls, backsplashes etc.

Other walls will be finished by sealing (CMU) and painting.

Apparatus floors will be concrete with a smooth finish and a sealer. Epoxy or other top coats will not be used. If a tile surface is already in place, we will decide whether to retain/repair it or remove and replace it based on the architect's evaluation of its condition and the extent of work needed.

There is no need for any floor covering over concrete floors in mechanical, utility and similar rooms and spaces.

No form of carpeting or fabric material will be used.

The Capital Project Manager will give each designer a copy of our current approved color chart at the start of the design process.

Any variation from standard colors or materials will require approval by the Chief, Facilities Maintenance and Capital Project Manager.

Apparatus Lane Doors – Rev.3/6/06

Apparatus lane doors will be commercial grade, sectional, overhead doors with torsion type springs and electric motors for operation (motor and spring size proportional to door size and weight) and a remote control feature. Doors will be either white or red in color.

Bi-fold doors will not be used or retained during renovation due to their increasing obsolescence and lack of availability of repair parts.

Overhead doors will be of steel construction, with an inner and outer steel skin and appropriate insulating material sandwiched between them. The outside surface may be smooth, textured or simulated (stamped) raised panels. There will be a single row of windows provided to allow drivers and officers to rapidly check conditions in front of quarters as they prepare to respond to an alarm. Every effort will be made to specify commonly available, standard models and sizes to facilitate rapid replacement of damaged door panels.

Overhead doors should overlap the existing door opening so that the door seals tightly against the inside of the wall, but without scraping the wall. Nail on metal/rubber strips on the outside should not be allowed for the door seal. Exterior weather stripping may be provided.

Fixed controls will consist of a standard 3 button wall switch mounted adjacent to each door. The 3 buttons will consist of “OPEN”, “CLOSE” and “STOP” in order from top to bottom. The open button will be green and the stop button will be red. No other fixed controls are required.

Remote controls will consist of a motor mounted receiver and a portable transmitter carried on the apparatus. The remote will also have three button operation (Open, Close and Stop in order from left to right) and will have a code setting device contained within that is easily changeable in the field. The remote system must be seamlessly compatible with our existing units, which are ALLSTAR Model No. BA8833T

The only exceptions to the apparatus lane door design will be when another appearance is required by the Historic Preservation Office or Board. All designs will be developed and submitted with the standard door design and changed only when ordered.

Windows – Rev. 3/8/06

Windows will be made of aluminum or steel for maximum resistance to forced entry. They will have double or triple low emission glazing. Windows will generally be the “double hung” type and the sashes should tilt in for cleaning. There will be two locking devices mounted to secure the two sashes in the fully closed position. Appropriate screens will be provided.

Other types of windows may be used where appropriate or required, including those that cannot open, if they can provide an equal or better level of security than listed above.

In historic firehouses, the modern windows should be specified to mimic the historic appearance to the extent practicable.

We have notified the Historic Preservation Office of our security requirements and the need for modern, secure windows to protect our critical infrastructure. All designs will be submitted based on our requirements listed above, and will only change if ordered during the Historic Preservation review and approval process.

The exception to the above will be that unusual, or unique windows in historic firehouses may be refurbished, repaired, etc, if they cannot be reasonably duplicated and they are located at or above the second floor where they are not easily accessible and the security risk is minimal.

EMS Decontamination Area – Rev. 3/15/06

The purpose of this area is to provide personnel a place to clean themselves and their equipment without carrying contaminants into occupied parts of the station.

The EMS Decon area will be in or adjacent to the apparatus bay. It may be as simple as fixtures attached to the garage wall, placed in an alcove or may be a separate room if space allows.

This area will have a stainless steel deep bowl sink with hot and cold water supplied. If space permits the sink should be provided with an integrated stainless steel drainboard on one or both sides. At least one additional stainless steel shelf should be provided. The drainboard and shelves are provided so cleaned equipment has a place to sit and dry. A closet type hook or two will also facilitate drying.

The Department has a contract for removal of medical waste and bio-hazards, special containers are provided for this purpose. They are red plastic about a 3 foot cube. Space needs to be provided for the medical waste bio-hazard containers in the EMS Decon room or next to the Decon area.

Washers and Dryers – Rev. 4/11/06

Our initial scope of work for most fire station design projects included a requirement for purchase and installation of a heavy duty commercial washer and a gear dryer. The purpose of this was to maintain firefighting protective clothing in a clean and safe condition.

Both of these units have a high initial cost, require special accommodations in our designs and require maintenance and repair which is not budgeted. In an effort to control costs, we have directed the substitution of household type washers and dryers in some cases.

We have thoroughly reviewed our requirements for proper maintenance of firefighting protective clothing. Each firefighter is now issued two complete sets of protective clothing, so a spare clean set is available if their protective clothing becomes, wet, dirty or contaminated. Members are also required to maintain a change of clothing (spare uniform) in their lockers when on duty. The Department has instituted a contract for twice yearly professional NFPA compliant cleaning and repair of all protective clothing, and there are a number of commercial washer/extractors strategically located around the Department which are available for members to use for gear cleaning. Our conclusion is that we do not have a requirement for washers and dryers in each station.

The requirement for any form of clothes washer and/or dryer is eliminated for all fire station projects, both in the future and those currently under design. Any issues arising from this change in current design projects should be brought to the attention of the Capital Project Manager or Chief, Facilities Maintenance for resolution.